1:Haskins K-4,5 (1952-1954)1956 SO11 Bahia Brazilians SO11

132 241 droughts and unseasonable heavy rains fall upon valuable, and vulnerable, field crops. Moreover, the cultivators of the Uplands are characteristically small farmers without large financial resources, so that the social repercussions of bad weather in this area may be marked.

311 137 [241] Wild Vegetation. Wild vegetation is a significant element in the landscape and an important resource for agricultural production in the Recôncavo. In 13 of the 21 municipios of the region, over 10 per cent of the total area, in 1940, was in mata, or forest, which was used as an agricultural resource.[31] In the southwestern third of the Recôncavo as the accompanying map indicates (Map 14), almost one-fifth of the total area was in this "exploited mata." It is inferred, through the addition of "unused and non-productive" land to the "exploited mata," that well over one-half of the total area of the Recôncavo was in wild vegetation.

137 192 In east-central Bahia three terms are used both colloquially and professionally to designate the wild vegetation: (1) Mata is used generally to refer to the littoral evergreen forest of the Brazilian east coast. (2) Caatinga refers to the semi-deciduous scrub-forest of the northeastern Brazilian interior. (3) Agreste designates the transitional forest, intermediate in structure and position between the mata and the caatinga.[32]

137 Vegetation Types. The narrow coastal plain of eastern Brazil, from the Rio Paraíba—in eastern Rio de Janeiro state—to central Bahia, bears a heavy evergreen forest or selva.[33] The northern end of this forest belt is the Baía de Todos os Santos. Although the trees are lower and the species somewhat less diverse than in northern Brazil, the littoral forests of the Recôncavo and the Bahian coast farther south are a characteristic variation of the "tropical rain forest."

[TEXT CONTINUED ON PAGE 55]

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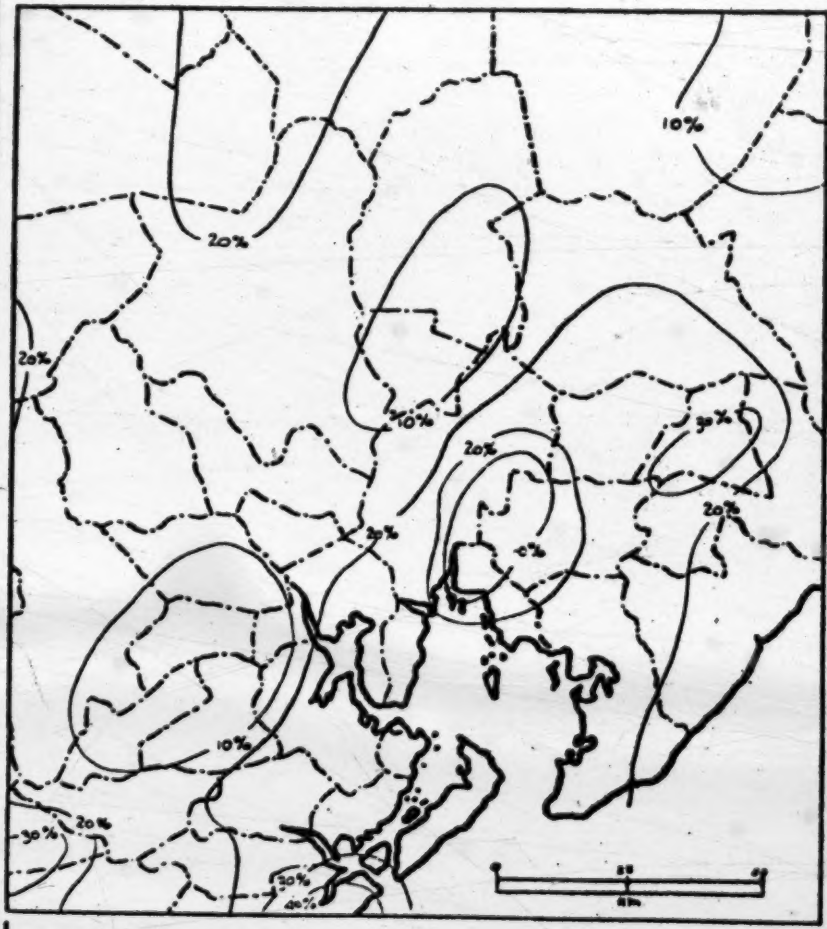

RECÔNCAVO OF BAHIA

Per cent of the Total Area in "Exploited Mata"—1940

Source of data: Recenseamento Geral do Brasil 1940. Censos Econômicos, Bahia, Vol. II.

MAP 14

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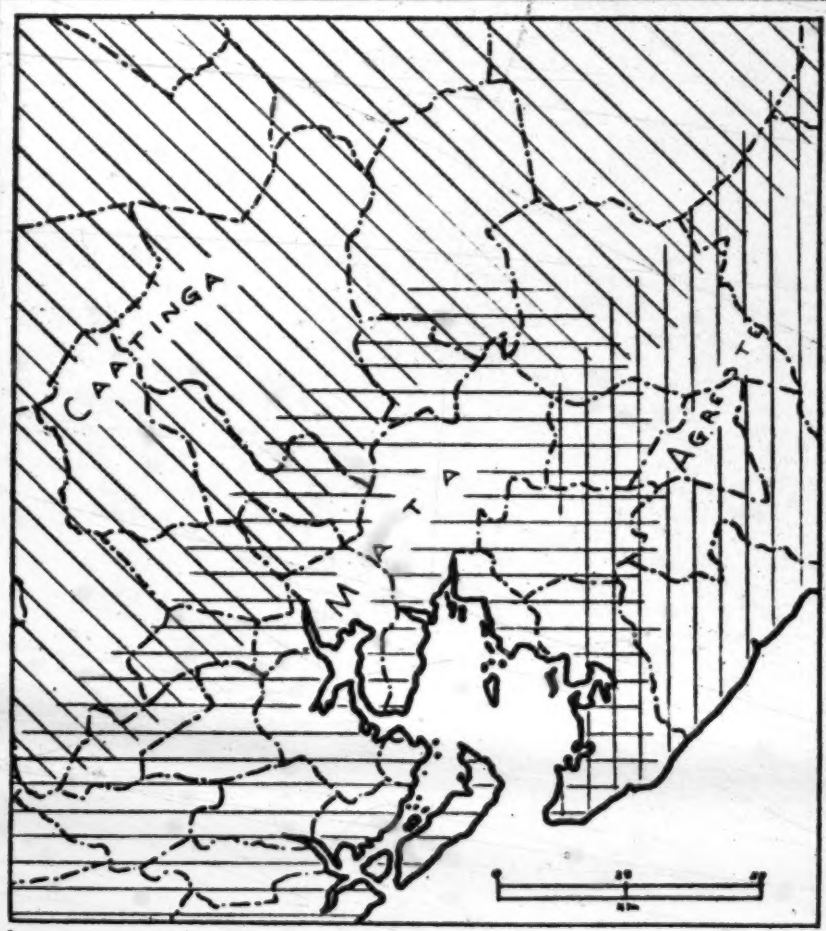

RECÔNCAVO OF BAHIA

Vegetation Types

[129] Modified from a private map of Dr. Geraldo C. Pereira Pinto, Instituto Agronômico do Léste

MAP 15

1:Haskins K-4,5 (1952-1954)1956 SO11 Bahia Brazilians SO11

137 Either because of some ecological limit or because almost all of the forest, even the tallest part, is second-growth, there usually are only two tiers of forest trees. Below the trees there is usually a mass of lianas and dense impassable brush. Often, however, the forest is too young to be fully developed, and there are vast areas of low second-growth trees protruding out of a jungle of climbers, creepers, low brush, and herbaceous plants. This low second-growth, called capoêira de mata, is especially common within the Recôncavo and is the dominant forest type in a zone bounded on the south by an arc from Salvador to Cachoeira and on the north by the limit of the littoral forest. The second-growth forest is characteristic also of the island of Itaparica. The forest of the mainland coast south of the estuary of the Rio Paraguaçu, both within and beyond the Recôncavo, is usually older and thus taller--this southern Bay coast is a zone of widely-scattered cultivation. The forest is interrupted in some places by open areas of grass or low deciduous trees. These openings seem to occur in areas of particularly sandy soils. The littoral forest is used primarily as a land reserve for a system of shifting cultivation and secondarily as a source of fuel (charcoal) and lumber. It is not used to any appreciable extent as pasture, even where the grassy openings are extensive.

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137 North of the Bay the evergreen littoral forest gives way to the agreste--the semi-deciduous transition forest. The agreste is differentiated from the mata by its deciduous trees and shrubs and by the frequency of the breaks in the forest where open patches of grass are found. The dominant cover is, however, a very dense growth of gnarled brush and low deciduous trees. Above these rise scattered taller deciduous trees and occasional palms, especially the wax palms (such as carnauba). All the vegetation is sub-xerophytic. The agreste is

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137 not unique to the coast of northern Bahia--it extends northward along the littoral almost to Cape São Roque, with the Recôncavo forming its [233] southern limit. In Bahia the grazing value of the agreste is not great, since the grassland areas consist of small and scattered patches and since there are relatively few herbaceous plants which are palatable to grazing animals.

The characteristic vegetation of the dry interior of the Northeast is the scrub forest, called caatinga or, sometimes, sertão.[34] Compared with the agreste, the grassy patches are more extensive, and the trees are lower. The tall vegetation of the scrub forest consists of thorny, xerophytic, deciduous brush and low trees and of low palms, especially the licurí (Syagrus Coronata). Cacti are very common in the caatinga of Bahia; the tall branched cactus is a very conspicuous element in the landscape, and there are several low, thorny cacti on [233] the scrub-forest floor. The cover also contains many herbaceous plants which are valuable forage.

137 132 Both the agreste and the caatinga show a phenomenal seasonal rhythm in response to the rainfall cycle. During the dry season in the caatinga the landscape is brown, bare of leaves, and hostile with thorns; the only green plants are the cacti. Much of the earth is bare, and its brown is indistinguishable from the bare trunks and twisted branches of the scrub trees. With the first rains a tremendous exuberance of green leaves, coarse grass, and succulent herbs [233] spring up, and the entire landscape is transformed. During this season the caatinga provides good forage for herds of cattle, sheep, and goats. But this lush season is brief, and soon the caatinga is again brown. In some years there is no rain, and although the stubborn vegetation manages to survive in a dormant state, men and animals must leave for the more humid coastal forests.

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• 137 The seasonal variation of the agreste is much like that of the caatinga, but the extremes of vegetative luxuriance are less marked. The scattered evergreen trees and shrubs make the agreste, in the dry season, less of a monochrome than the caatinga.

In addition to the general contrasts between the three basic vegetation types, there are lesser variations within each which are the result of differences in exposure, soil, and land use. These differences are clearly to be seen in the contrasting varieties of scrub forest. In the caatinga sêca (dry scrub forest) the trees are low, usually less than 4 to 5 meters, and the forest is open, with extensive patches of grass and of bare sand. It is most characteristic of sandy uplands in the Crystalline or Tabular Upland zones. In areas where soils, moisture conditions, land-use patterns, etc., are more favorable to forest growth, the characteristic vegetation is caatinga grande. The trees and tall cacti reach 7 to 10 meters, and underneath there is a continuous cover of tall herbaceous plants with little grass and no bare spots. In the agreste, formations similar to caatinga grande and sêca are found. Within the littoral forest, soil and exposure differences sometimes produce marked contrasts. However, the intensive land use in the littoral forest has produced so much second-growth that it is not certain which variations result from environmental and which from human factors. In the littoral forest and to a lesser extent in the caatinga and agreste, there are poorly drained areas with open glades of coarse grass and rank herbaceous plants.

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311 In the littoral forest, crop cultivation is leaving its mark upon the wild vegetation, producing a formation of low trees and dense ground cover. In those parts of the caatinga and agreste within the Recôncavo, both cultivation and grazing are constantly altering the "natural" development of the vegetation. Extensive areas of a growth

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137
31 similar to caatinga sêca appear where soil and moisture conditions would seem to indicate caatinga grande. These areas are especially common where cultivation and grazing are intensive.

The wild vegetation of the Recôncavo is used for forage, timber,
[313] and fuel. Only the mata is used for timber, and it is exploited only on a small scale. All three of the main vegetation types contribute toward supplying the local market with fuel--firewood and charcoal. The
[314] mata is the principal charcoal source, especially in the forest zone northwest of the city of Salvador and along the Salvador-Feira de Santana highway. In the interior sections of the Recôncavo the caatinga and the agreste provide firewood for cooking and other household purposes. For grazing, the caatinga is far superior to the agreste and the mata, except when the latter is in the first stages of regrowth. Burning is employed extensively in an effort to increase the grazing value of the caatinga and agreste. At first this provides more grass and herbaceous growth, but after repeated burning and continuous over-grazing, there develops an impenetrable cover of thorny, tough brush, three to five feet tall, and quite valueless.[35]

13 Conclusion - Physical Setting. The analysis of the physical setting which is to serve as background for the discussion of agriculture in the Recôncavo does not reveal a homogeneous region. Rather it would seem that the Recôncavo is best visualized as a nodal region, with a relatively homogeneous but areally restricted core and a broad transitional perimeter. The perimeter is composed of several sub-regions,
each with a distinctive transitional character. As a summation of
[128] the physical setting, each of the sub-regions of the perimeter and core of the Recôncavo will be assigned a name, as a matter of convenience, with the physical elements briefly indicated for each:[36]

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127 Hidrologia, 1948). (2) Ministério da Agricultura, Serviço de Meteorologia,
132 Normais Climatológicas (Rio de Janeiro: Serviço de Meteorologia, 1941).
(3) Data made available by the meteorological section of the Instituto Agronômico Léste at Cruz das Almas,

132 The risks involved in using these data are considerable. Of the
127 20 meteorological stations in eastern and central Bahia, only 2 or
114 perhaps 3 are reliable. For the others, gross errors and even deliberate falsification are notorious. Probably the data for Salvador is reasonably dependable, and during the field investigation for this study, there was opportunity to observe the conscientious attention to detail at Cruz das Almas.

The sheer lack of meteorological stations makes it necessary to infer most of the climatic pattern of the Recôncavo. It is fortunate that the two dependable stations occupy relatively representative sites in terms of the terrain and the land-sea relationship. Nevertheless, even the highly generalized climatic analysis of this section is offered with considerable hesitation. It is included in the study primarily as a base for agricultural research and, it is hoped, as a stimulant to a more adequate analysis of weather and climate for the Recôncavo.

000 [22]The municípios of Santo Estêvão, Feira de Santana, and Irará.

• [137] [23]Often the slopes are more heavily forested than the surrounding tablelands, but it is not absolutely certain that this difference is unrelated to land use--the slopes are usually too steep for cultivation. In a number of municípios immediately to the east of this dry belt perennial or seasonal ponds were observed at the eastern or southern base of a number of monadnocks. Presumably these ponds are related to heavier precipitation on the slopes above.

[24]The mean annual precipitation of São Bento das Lajes (in the município of São Francisco) is 1947 mm. At São Gonçalo the mean annual precipitation is 1005 mm.

[25]According the advice of agronomists in the area. This approximation is based upon the general experience of the cultivators and not upon controlled experiments which could take into account varying temperatures, humidity, and soil moisture conditions.

[26]The mean of the deviations at Cruz das Almas was 33 per cent.

[249] [27]Except that 100 mm. is considered to be the minimum for tobacco cultivation, this exact figure has no particular significance. It is used here merely as a device to record the movement and duration of the season.

[249] [28]This seems to reflect accurately the climatic situation in the Coastal Plain, where sugar cane is grown, for the cane planters frequently complain of the irregularity of the end of the wet season.

[29]It is not possible to assign strict values for "too much" and "too little" precipitation in these agricultural zones of the Recôncavo. In the tobacco zone there is likely to be difficulty if the precipitation for September--or the following months--the cutting period, falls below

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[113] [12]Instituto Brasileiro de Geografia e Estatística, Características Demográficas do Estado da Bahia, No. 8 (Rio de Janeiro: Serviço Gráfico do Instituto Brasileiro de Geografia e Estatistica, 1949), pp. 59-80.

[114] The Zona Fisiográfica Centro-Litoral (Central-Littoral Physiographic zone) is one of a series of nine so-called physiographic zones used as major subdivisions in Características Demográficas do Estado da Bahia, No. 8. It includes all 21 of the Recôncavo municipios, and 17 others.

[13]Amaral, op. cit., II, 367.

[14]Amaral, op. cit., II, 366, and Calogeras, op. cit., p. 31.

[137] [15]Manihot utilissima, called cassava, manioc, or, sometimes, tapioca in English and mandioca in Portuguese.

[16]Amaral, op. cit., II, 11-12.

[17]Prado, op. cit., pp. 40-41.

[113] [18]Minas, Yorbes, Geges, Hausa, and other Guinea Coast peoples. See T. Lynn Smith, Brazil: People and Institutions (Baton Rouge: Louisiana State University Press, 1946), pp. 168-169.

[794] [791] [19]African religions, for example, survive in a modified form in the candomblé (fetish) cults and in the supernatural conceptions prevalent in the Recôncavo.

[20]Neither the total number of slaves imported into Brazil nor the number brought to the Recôncavo is known. Calogeras, op. cit., pp. 27-28, estimates the number as 40,000 per year in the seventeenth century, 50,000 per year in the eighteenth and nineteenth centuries, or 14,000,000 for the 300 years of the slave trade. Another source has estimated that 1,200,000 slaves were imported between 1550 and 1850, a more reasonable figure. See section by Pedro Calmon in Curious and Interesting Facts Concerning the First European Settlement Made in the New World, p. 9. It is also asserted in this latter source that "more than half remained in Bahia;" this is less reasonable.

[21]Prado, op. cit., p. 46.

[216] [22]A rope-like twist of dark, often sweetened, tobacco wound in a large coil of 50 to 100 lbs.

[23]At the end of the seventeenth century Bahia was exporting 7,500 tons of sugar per year; Pernambuco 5,400 tons, and Rio de Janeiro 5,350 tons. At this same period Bahia exported 25,000 rolls of tobacco (perhaps 1,125 tons at 45 kg. per roll) compared with 2,500 rolls from Pernambuco and Alagoas. Calogeras, op. cit., p. 31.

[433] [24]Calogeras, op. cit., pp. 30-31, cites João Antonil, Cultura e Opulencia do Brasil, por sus Drogas e Minas (1711), who says that in 1711 the mean sugar export--which must have been virtually the entire production--per engenho in Bahia was 52 tons, in Rio de Janeiro 41 tons, and in Pernambuco 22 tons. The weight is given in arrobas by Calogeras.

[25]Amaral, op. cit., II, 84.

[26]Calogeras, op. cit., pp. 38-39.

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every section of which is more than 50 kilometers from Salvador, the economic center of the Recôncavo, and also more than 50 kilometers from the geometric center in Santo Amaro. If a line were drawn from the cidade of Alagoinhas southwestward to the cidade of Nazaré, the following municípios would fall entirely west of that line: Irará, Coração de Maria, Feira de Santana, São Gonçalo, Conceição da Feira, and Santo Estêvão--all north of the Rio Paraguaçu--and Muritiba, Cruz das Almas, São Félix, São Filipe, and Conceição do Almeida--all south of the Rio Paraguaçu. These 11 of the 21 municípios of the Recôncavo are all more than 50 kilometers from Salvador--all are much farther in terms of land transport. In these eleven municípios live 125,000 of the 196,000 agricultural workers. In part, this eccentricity with respect to Salvador is a result of the shape of the land surface, with the city located at the end of a peninsula. Only one of these 11 municípios, São Félix, lies on tide water, and that at the extreme upper limit of navigation. The others are so arranged that they cannot make optimum use of the central position of the Bay, with its relatively cheap and direct route into the capital.

This eccentrically located belt is arcuate in form. It is the demographic representation of the transition zone from forest to scrub forest, which is often also the transition from the Coastal Plain to the Tabular or Crystalline Uplands. The concentration of agricultural labor in this belt is obviously significant from many points of view: social and political as well as economic.

Clustering is a characteristic pattern of Latin American population. The Recôncavo is the chief population cluster and the greatest single concentration of agricultural labor force within the state of

1:Haskins K-4,5 (1952-1954)1956 SO11 Bahia Brazilians SO11

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311 important had less intensive cultivation than the two principal centers mentioned above.

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311 Most of the remaining crops of the Recôncavo were either minor subsistence crops of general distribution, not of themselves accounting for any strong concentration of cropland, or were major crops produced in small separated centers of intensive cultivation. The Northwestern Recôncavo corn and bean areas, the coconut plantations of the beach line, the Southwestern Recôncavo sugar cane and coffee areas, and the suburban rings of orange production were zones where the mean intensity of cropland was low or, at best, modest.

There were two zones of very low intensity of cropland which have not been discussed previously because they did not have significant concentrations of individual crops. The belt of Intermediate Hills around
[137]
[231] the Central Recôncavo sugar cane area is largely forested, the scene of very scattered cultivation, livestock enterprises, and extractive industries. This belt was used, as will be seen, to provide fuel and to maintain a livestock reserve for the adjoining sugar cane area. The forested belt between the beach line and the inland areas of sugar cane and tobacco cultivation were used primarily for extensive systems of cultivation and for the small scale production of livestock. Only around the perimeter of Salvador was this forested belt intensively used, for in this area there were orange groves, manioc gardens, and a few very small truck farms.

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311 Expansion of Cropland. There can be little question but that
178 the Recôncavo as a whole was an area of expanding cropland in the 1940's.[31]
[161] In no other way could the increased food necessary for the growing popu-
[434] lation be supplied, for there were not then nor are there now external sources for large quantities of staples, excepting only livestock. There

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000 the storekeeper-buyer or the local tobacco warehouse. The roots of the
258 manioc are processed locally, in casas de farinha, and the farinha de
438 mandioca is sold in the local market or to storekeepers in the nearby village or town.

249 The sub-region of tobacco and manioc production occupies the
244 humid eastern and southern edges of the Uplands. The chief center of
311 production, the Southwestern Recôncavo, occupies a zone of deep, sandy
134 and sandy loam soils lying in flat-surfaced uplands above crystalline rocks. The northern parts of the tobacco-manioc sub-region occupy the rough, dissected southern edge of the sandy Tertiary taboleiros--in this northern area the production of both crops is less intensive than in the Southwestern Recôncavo. The area of primary tobacco and manioc production generally conforms to the forest and scrub forest transition and is expanding southwestward beyond the traditional Recôncavo along this
[433] physical boundary zone. The intensity of production is also increasing,
[178] but with violent year to year fluctuations.

241 In addition to sugar cane, tobacco and manioc, other subsistence
433 and commercial products are grown in the Recôncavo. The most important of these are corn and beans, grown as commercial and subsistence crops in the north and west of the region, and coconuts, which are produced along the beach line. Bananas, sweet potatoes, and peanuts are grown in most parts of the Recôncavo, but on a small scale.

241 There are several areas in which there is little or no cultiva-
311 tion. The rougher Intermediate Hills, which are forested, separate the
137 sugar cane sub-region from the tobacco-manioc sub-region. The lowland areas of Tertiary and crystalline soils are also forested and are cultivated under a non-intensive land rotation system with some associated
241 livestock. The Recôncavo is distinguished from the surrounding areas by its relatively greater mean intensity of cultivation. In the

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249 [457] purchased in Europe at the expense of precious foreign exchange, tobacco can be processed for the trade with only a shed and a few crude presses. [489] Rather than a relatively expensive rail net to assemble the crop, tobacco can be carried by truck, small boat, or even by pack animal. More- [433] over, since the cultivation of tobacco is integrated with the production of food and is primarily an activity of small farmers, it is possible to adjust the size of the crop from year to year with a minimum sacrifice of capital investment.

277 The tobacco industry of the Recôncavo has a number of disadvantages as a base for commercial development which may be summarized as problems of: (1) land; (2) markets; and (3) system of production.

249 311 Leaf tobacco production in the Recôncavo and in the adjoining areas of Bahia is confined to a narrow belt between the humid edges of the Up- [134] lands and the dry interior of the state. An expansion toward the coast would bring tobacco first into the Intermediate Hills where the upland soils which are preferred for tobacco cultivation are of limited area and then into the humid lowlands in which the Cretaceous soils are unsuitable, apparently, for the cultivation of quality leaf tobacco [132] and in which the Tertiary soils are extremely infertile. An expansion westward would bring tobacco into an area where the precipitation in [134] most years is inadequate. The interior north of the tobacco area is dry and has very poor soils, the Tertiary upland soils. There is an [137] opportunity for the further expansion of the cultivation of tobacco toward the southwest along the forest and scrub forest boundary into a region which produces the same general type of tobacco as the Southwestern Recôncavo--the "Mata" grade. This apparently is the meaning of the increased tobacco production in Santo Antônio. It should be possible, at least as far as the soils and climate are concerned, to continue the expansion toward the southwest into the adjoining

4: Pierson Z-4, 5 (1935-1937) 1967
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[City of Salvador]

At Bahia in 1807, 1809, 1813, 1816, 1826, 1827, 1828, and 1830, slave revolts broke out, terminating in the serious Malê uprising of 1835. There existed here, particularly in the nineteenth century, a well-established group of Negro disciples of the prophet Mohammed. Here Nagô was for a long time a Negro lingua franca (or, to use the corresponding Portuguese expression, a *lingua geral*), and Nagô is still occasionally to be heard among some of the older blacks. Here one might have encountered in the years just preceding abolition in 1888 an interesting paradox: while at home Bahia clung tenaciously to slavery, she was known abroad for the eloquence of her abolition orators.[1] Here, also, one might have observed the gradual fusion of Catholic belief and ritual with African mythology and religious practice, evidences of which may be seen today in *candomblés*, or fetish-cult centers, like that of Gantois, for example, whose ceremonies have been carried on in the same sacred place for many decades.

In the sixteenth and early seventeenth centuries Bahia became one of the world's great sugar centers where a small aristocracy, as is attested today by the pretentious edifices still standing, achieved great wealth. As early as 1587 there were forty-seven sugar *engenhos*[4] in and about Bahia, and

[1] See Luiz Anselmo da Fonseca, *A escravidão, o clero e o abolicionismo* (Bahia, 1887), *passim*. This book, although obviously written as abolition propaganda, cites names, places, and dates to support its contentions and does not overlook negative cases.

[4] Each *engenho* consisted of a sugar plantation and a mill for processing the cane. Those at Bahia often had a capacity of a thousand tons or more yearly. Each was largely a self-sustaining economic unit, dependent upon the labor of numbers of Negro slaves. H. Morse Stephens says (*Portugal* [New York, 1903], p. 128) that sugar cane was imported into Brazil from the Madeira Islands in 1548.